CLAIMS

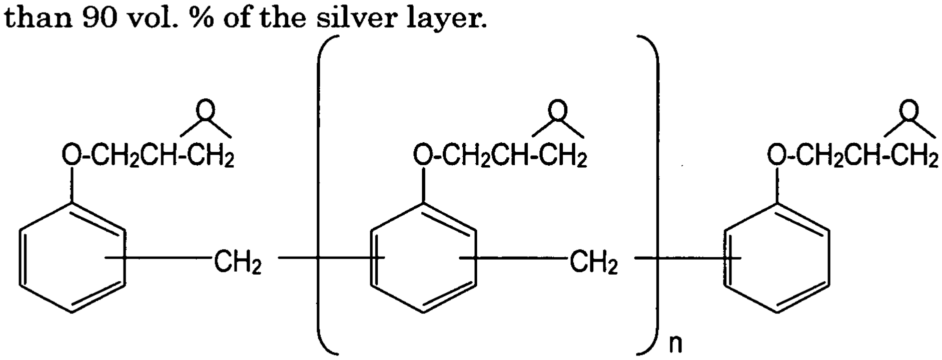
1. A solid electrolytic capacitor comprising:

a valve metal;

a dielectric oxide film layer disposed on a surface of the valve metal;

a solid electrolyte layer disposed on a surface of the dielectric oxide film layer; and

a cathode layer disposed on a surface of the solid electrolytic capacitor and having a silver layer which includes silver particles, and at least one of phenolic novolak type epoxy resin represented by formula (1) and trishydroxyphenylmethane type epoxy resin represented by formula (2), and not less than 90 wt. % of the silver particles being occupied by flaky silver particles, and the flaky silver particles occupying not less than 50 vol. % and not greater than 90 vol. % of the silver layer.



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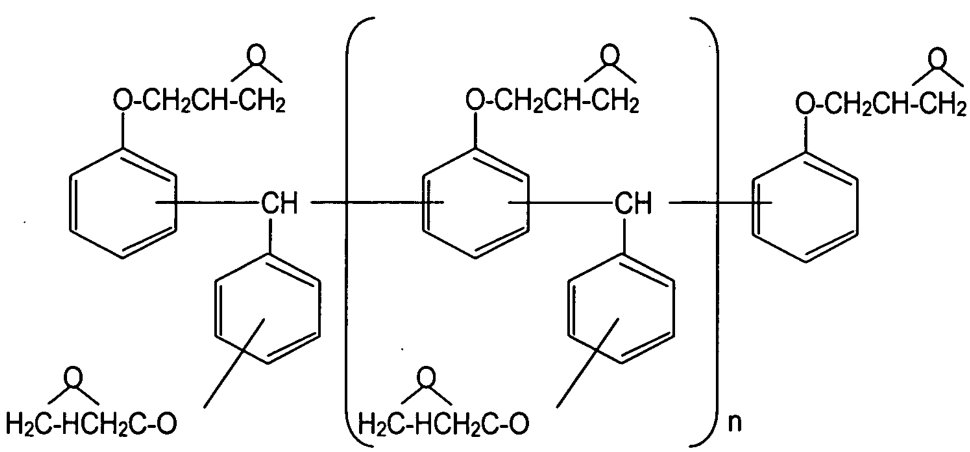


(2)

2. The solid electrolytic capacitor of claim 1, wherein a particle diameter of the flaky silver particles is not smaller than 0.1μm and not greater than 30μm, and a longitudinal length of a flat section of one of the flaky particles is not shorter than 2 times and not longer than 10 times of a thickness of the flat section of one of the flaky silver particles.

3. The solid electrolytic capacitor of claim 1, wherein the solid electrolyte layer has an average surface roughness of not smaller than 0.1μm and not greater than 30μm.

4. The solid electrolytic capacitor of claim 1, wherein the solid electrolyte layer includes at least one of manganese oxide and conductive polymer of which basic skeleton is one of pyrrole, thiophene, aniline, furan, and derivatives thereof.

5. A process for producing a solid electrolytic capacitor, the process comprising the steps of:

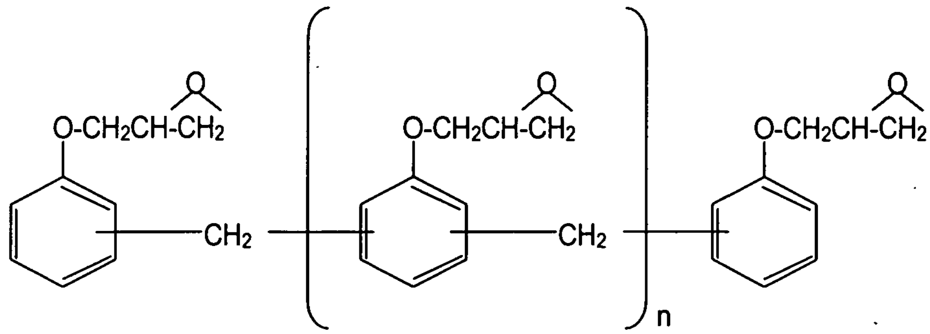
forming a dielectric oxide film layer on a surface of a valve metal;

forming a solid electrolyte layer on a surface of the dielectric oxide film layer; and

forming a cathode layer, which includes a silver layer, on a surface of the solid electrolyte layer,

wherein the silver layer is formed with silver paste, the silver paste includes silver particles and at least one of phenolic novolak type epoxy resin represented by formula (1) and trishydroxyphenylmethane type epoxy resin represented by formula (2), and not less than 90 wt. % of the silver particles are

occupied by flaky silver particles, which accounts for not less than 50 vol. % and not greater than 90 vol. % in the silver layer.



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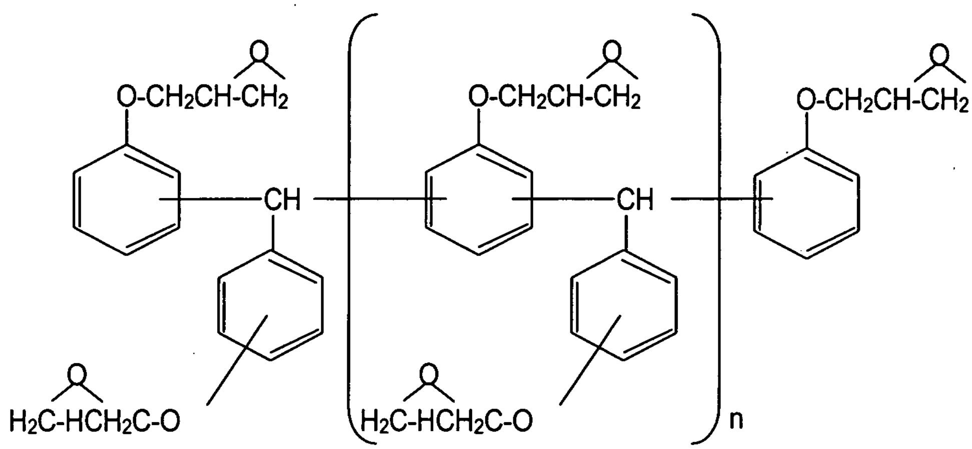

(2)

6. The process of claim 5, wherein a particle diameter of the flaky silver particles is not less than 0.1μm and not greater than 30μm, and a longitudinal length of a flat section of one of the flaky particles is not shorter than 2 times and not longer than 10 times of a thickness of the flat section of one of the flaky silver particles.

7. The process of claim 5, wherein in the step of forming the cathode layer, the silver paste undergoes heat treatment at a temperature of not lower than 180°C and not higher than 230°C, and a curing stress of the silver layer is not smaller 50 kg/ cm^2 and not greater than 300 kg/cm^2.